

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: LAYZELL *et al.*  
Serial No.: n.a.  
Date Filed: Herewith  
Title: Methods for Enhancing Plant Growth Using  
Hydrogen Gas  
Group Art Unit: n.a.  
Examiner: n.a.  
Agent Reference No.: 1998-016-08US

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir,

**PRELIMINARY AMENDMENT  
and  
FEE AUTHORIZATION**

Applicants wish to amend this application as follows:

**IN THE CLAIMS:**

Please amend claim 9 as shown below:

9. (Amended) The method of claim 1, wherein the H<sub>2</sub> gas is generated by microorganisms selected for their ability to evolve H<sub>2</sub>.

Please enter new claims 24 and 25 as shown below:

24. (New) The method of claim 1, wherein the H<sub>2</sub> gas is generated by soil microorganisms.

25. (New) The method of claim 1, further comprising combining the soil exposed to H<sub>2</sub> with soil not exposed to H<sub>2</sub>, and growing the plant in the thus combined soil, wherein the H<sub>2</sub> is generated by H<sub>2</sub> evolving microorganisms.

## REMARKS

Claims 1 to 25 are in the case. By the instant amendment, claim 9 has been amended to recite that "...the H<sub>2</sub> gas is generated by microorganisms selected for their ability to evolve H<sub>2</sub>". Support for this amendment can be found in the specification at, for example, page 9, lines 17 to 19, and page 9, lines 20 to 21. Also, claims 24 and 25 have been added. Claim 24 recites that the H<sub>2</sub> gas is generated by soil microorganisms, support for which can be found in the specification at, for example, page 2, lines 22 to 23. Claim 25 is based on original claims 2 and 9, and further defines the invention. No new matter has been entered.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "Version with markings to show changes made".


### Fee Authorization

Applicants' Fee Transmittal form included payment for 23 claims, including 3 independent claims. However, the instant amendment has added 2 dependent claims to the case, such that the total number of claims has increased from 23 to 25 claims. The Office is authorized to charge an Extra Claims Fee of \$18.00 (Fee Code 203), corresponding to the 2 extra claims, to our Deposit Account No. 17-0110.

Applicants submit that claims 1 to 25 are in condition for substantive examination and respectfully request same. Any further fees that may be required in respect of this Preliminary Amendment may be charged to Deposit Account No. 17-0110.

Should the Examiner wish to discuss this Amendment or the application, she/he is requested to call the undersigned agent or Carol Miernicki Steeg at (613) 533-2342.

Respectfully submitted,



Stephen J. Scribner  
Reg. No. 44,452

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Claim 9 has been amended as shown below:

9. (Amended) The method of claim 1, wherein the H<sub>2</sub> gas is generated by H<sub>2</sub> evolving microorganisms selected for their ability to evolve H<sub>2</sub>.

New claims 24 and 25 have been entered as shown below:

24. (New) The method of claim 1, wherein the H<sub>2</sub> gas is generated by soil microorganisms.

25. (New) The method of claim 1, further comprising combining the soil exposed to H<sub>2</sub> with soil not exposed to H<sub>2</sub>, and growing the plant in the thus combined soil, wherein the H<sub>2</sub> is generated by H<sub>2</sub> evolving microorganisms.